



Data Sheet



# 37XR-A True RMS Digital Multimeter

True RMS digital multimeter with component and logic test for troubleshooting electronics at the bench or on the job site.

- Inductance to 40 H, frequency to 40 MHz, capacitance to 400  $\mu$ F, logic to 20 MHz
- Input warning tone when test leads are in wrong jack
- 10,000 count, 0.1 % accuracy
- 1000 V/750 V DC/AC True RMS
- 10 Amps AC/DC, fully safety fused
- Resistance to 40 M $\Omega$
- Continuity beeper
- Min/Max, Average, Relative, Peak, and Data Hold
- Auto power off to save battery life
- Separate door for easy battery and fuse access
- Magne-Grip™ Holster with magnetic hanging strap
- CAT III 600 V, CAT II 1000 V rated
- UL (cULus) listed
- Three-year warranty

## No hassle warranty

*No waiting.*

*No shipping charges.*



Our commitment to high-quality products and customer service is demonstrated by our industry exclusive "No Hassle" warranty. In the unlikely event that an Amprobe Test Tool requires warranty service, any of our local dealers are authorized to replace it, on the spot.

(note: \$500 MSLP limit)





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### General Specifications

<b>Autoranging;</b>	
<b>Display:</b>	4-3/4 digit LCD, 10,000 counts with 41-segment analog bar graph
<b>Display Update Rate:</b>	2/sec, nominal; Power Battery: 9 V NEDA 1604, JIS 006P, IEC 6F22
<b>Battery Life:</b>	150 hrs typical (alkaline) frequent use of backlight will decrease battery life
<b>Operating Temperature:</b>	0 °C to 45 °C at < 70 % R.H.
<b>Storage Temperature:</b>	-20 °C to 60 °C, 0 to 80 % R.H. with battery removed from meter;
<b>Temperature Coefficient:</b>	0.1 x (specified accuracy) per °C ( 0 °C to 18 °C , 28 °C to 45 °C)
<b>Altitude:</b>	2000 m (6562 ft)
<b>Dimensions:</b>	195 x 92 x 60 mm (7.75" x 3.55" x 2.4")
<b>Weight:</b>	400 gr (1 lb) without holster, including battery

### Specifications (23 °C ± 5 °C, <75 % R.H. non-condensing)

Function	Range	Accuracy
<b>DC Voltage</b>		
<b>Ranges</b>	1000 mV, 10 V, 100 V, 1000 V	± (0.1 % rdg + 5 dgt)
<b>Resolution</b>	100 µV	
<b>AC Voltage (45 Hz to 2 kHz) True RMS</b>		
<b>Ranges</b>	1000 mV, 10 V, 100 V, 750 V	
	750 V range: 45 to 1 kHz:	± (2.0 % rdg + 10 dgts)
	All other ranges, 45 to 500 Hz:	± (1.2 % rdg + 10 dgts)
	All other ranges, 500 to 2 kHz:	± (2.0 % rdg + 10 dgts)
<b>Resolution</b>	100 µV	
AC coupled True RMS specified from 5 % to 100 % of range		
<b>DC Current</b>		
<b>Ranges</b>	100 µA, 1000 µA, 10 mA, 100 mA, 400 mA, 10 A	
	100 µA range:	± (0.5 % rdg + 10 dgt)
	1000 µA to 400 mA ranges:	± (0.5 % rdg + 5 dgts)
	10 A range:	± (1.5 % rdg + 10 dgt)
<b>Resolution</b>	0.01 µA	
<b>AC Current (45 Hz to 1 kHz) True RMS</b>		
<b>Ranges</b>	100 µA, 1000 µA, 10 mA, 100 mA, 400 mA, 10 A	
	100 µA to 100 mA ranges:	± (1.5 % rdg + 10 dgts)
	400 mA range:	± (2.0 % rdg + 10 dgts)
	10 A range:	± (2.5 % rdg + 10 dgts)
<b>Resolution</b>	0.01 µA	
AC coupled True RMS specified from 5 % to 100 % of range		
<b>Resistance</b>		
<b>Ranges</b>	1000 Ω, 10 kΩ, 100 kΩ, 1000 kΩ, 10 MΩ, 40 MΩ	
	1000 Ω to 1000 kΩ ranges:	± (0.5 % rdg + 8 dgts)
	10 MΩ range:	± (1.0 % rdg + 10 dgts)
	40 MΩ range:	± (2.0 % rdg + 10 dgts)
<b>Capacitance</b>		
<b>Ranges</b>	40 nF, 400 nF, 4 µF, 40 µF, 400 µF	
	40 nF, 400 µF ranges:	± (3.0 % rdg + 10 dgts)
	400 nF to 40 µF ranges:	± (3.0 % rdg + 5 dgts)
<b>Resolution</b>	0.01 nF	



Specifications (23 °C ± 5 °C, <75 % R.H. non-condensing), cont.

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Function	Range	Accuracy
<b>Inductance</b>		
Ranges	4 mH, 40 mH, 400 mH, 4 H, 40 H	
	For values of Q <sup>2</sup> 7:	± (5.0 % rdg + 30 dgts)
Resolution	1 µH	
<b>Frequency</b>		
Ranges	100 Hz, 1000 Hz, 10 kHz, 100 kHz, 1000 kHz, 10 MHz	± (0.1 % rdg + 5 dgts)
Resolution	0.01 Hz	
<b>Duty Cycle</b>		
Ranges	0 to 90 %	
Accuracy	5V logic:	± (2.0 % rdg + 20 dgts)
Resolution	0.01 %	
Frequency Range	0 % to 10 %: 40 Hz to 990 kHz 10 % to 90 %: 40 Hz to 20 kHz	
<b>Logic Test</b>		
Logic Type	TTL, CMOS	
Thresholds	Logic 1 (Hi): TTL 2.8 V ± 0.8 V, CMOS 4 V ± 1 V Logic 0 (Lo): TTL 0.8 V ± 0.5 V, CMOS 2 V ± 0.5 V	
Frequency Response	20 MHz	
<b>dBm</b>		
Ranges	-13 dBm to + 50 dBm	
	45 Hz to 5 kHz:	± (0.7 dB + 8 dgts)
	5 kHz to 10 kHz:	± (2.5 dB + 8 dgts)
Resolution	0.01 dBm	
<b>Continuity</b>		
Audible Indication	< 40 Ω	
<b>Diode Test</b>		
Test Current	1.0 mA (approximate)	
Open Circuit Volts	3.0 V dc typical	
<b>Peak</b>		
AC Volts Accuracy	100 V, 750 V ranges:	± (3.0 % + 200 dgts)
	1000 mV, 10 V ranges:	unspecified
AC Current		± (3.0 % + 200 dgts)
	100 µA range:	unspecified
<b>Overload Protection</b>		
AC/DC Voltage	All ranges: 1000 V dc or 750 V ac rms	
AC/DC Current	µA/mA input: F0.5 A/1000 V fast-blow ceramic (6.3 x 32 mm) 10 A input: F10 A/1000 V fast-blow ceramic (10 x 38 mm) (10 A for 4 minutes maximum followed by a 12 minute cooling period)	



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### Included Accessories

Test leads with threaded alligator clips (TL36A), 9 V battery (installed), Magne-Grip™ Holster with magnetic hanging strap (H2-XRA), spare fuse, operators manual

### Optional Accessories

VC221B Padded Vinyl Carry Case  
DL248D Deluxe Test Lead Kit  
DC205C Heavy Duty Case  
HV231-10A High Voltage Probe  
TP254A High Temperature Probe

### Amprobe® Test Tools

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